

Kelly Ranch
Habitat Conservation Area
(CNLM No: S024)

Annual Work Plan
October 1, 2011 – September 30, 2012

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I. Introduction and Summary

This work plan has been developed from the guidelines for goals and objectives set forth in the Kelly Ranch Habitat Conservation Area (HCA) Management Plan (CNLM 2008). The Management Plan includes management requirements agreed to by the United States Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG), and additional management activities that the Center for Natural Lands Management (CNLM) deems appropriate to protect and maintain the natural resources in perpetuity. CNLM holds a conservation easement (since February 2002) on the HCA and performs or oversees the tasks identified in the management plan.

The purpose of this work plan is to identify the tasks and budget required to complete the management activities for the upcoming management year that will begin on October 1, 2011 and end on September 30, 2012. Unless otherwise stated, all tasks will be performed by Preserve Manager Patrick McConnell.

Summary of Tasks and Goals for the Management Year:

- Note all sensitive animal species observed
- Perform habitat assessment and continue population studies on Orcutt's hazardia (*Hazardia orcuttii*)
- Perform habitat assessment on a wart-stem lilac (*Ceanothus velutinus*) locality
- Map sensitive annual plant species as necessary
- Map additional Nuttall's scrub oak (*Quercus dumosa*) and wart-stem lilac occurrences
- Remove natal grass (*Melinis repens*), Veldt grass (*Ehrharta* sp.), Saharan mustard (*Brassica tournefortii*), and Pampas grass (*Cortaderia selloana*).
- Investigate feasibility of removing lower kiosk and bench
- Update materials in upper kiosk
- Patrol and conduct site enforcement on a regular basis
- Report conservation easement for compliance to conservation values
- Report and describe data collected and management actions taken on the HCA to the wildlife agencies
- Provide an accounting of funds to be spent in the management year

Appendix 1 (*2011-2012 Task Schedule*) identifies the approximate schedule of tasks for the upcoming management year. The location of the HCA is shown in Appendix 2.

II. Management Activities

The following sections identify and describe the activities to be performed during this management year. Based upon the Property Analysis Record (PAR) developed by CNLM to outline long-term management tasks and costs, management activities are categorized into several task groups: Capital Improvements, Biological Surveys, Habitat Restoration, Public Services, Conservation Easement Compliance, Reporting, Office Maintenance, and Operations. Each of these categories will be discussed below.

A. Capital Improvements

The lower kiosk and bench located at the cul-de-sac at the northern end of Whitman Way has become a party and dump spot. CNLM would like to have both removed. Spyglass Hills Home Owner's Association does not claim any oversight of the bench or kiosk, and the large apartment complex that comprises the remainder of the Kelly Ranch development is not aware of an easement for their uses at this time. CNLM will attempt to have these structures removed. New informational materials will be placed in the upper kiosk during this management year.

B. Biological Monitoring

Monitoring activities at the HCA will continue over the next management year (Table 1). The Kelly Ranch HCA Management Plan (CNLM 2008) details habitat assessment methods. Monitoring during the next year will mostly include habitat assessments on habitat containing wart-stem lilac and Orcutt's hazardia. Other searches and rare plant mapping will take place as described below. All data on location and counts will be entered or stored in a Geographic Information System (GIS) database. A brief description of monitoring activities outlined by taxa is provided below:

1. Sensitive Plant Species Surveys

Any occurrences of small-flower microseris, which was found while performing Orcutt's hazardia habitat assessment during spring 2011, will be counted and mapped.

2003 surveys by Scott McMillan suggest that Del Mar manzanita exists along the slope north of Twain Ave. He noted less than 20 individuals existing inside dense habitat that consists of patches of Nuttall's scrub oak and wart-stem lilac chaparral surrounded by a virtually continuous cover of lemonade berry (*Rhus integrifolia*). Previous to completing a vegetation map during the summer of 2011, the Center considered Del Mar manzanita highly unlikely to occur in this location, and that the point was likely a mapping error. However, given that the point falls within scrub oak vegetation as mapped from afar, there is some likelihood that Del Mar manzanita actually occurs here. This hillside will be searched for Del Mar manzanita, and wart-stem lilac and scrub oak will also be counted and mapped while performing the search. If Del Mar manzanita is found, its abundance will be estimated, and the extent of the occurrence mapped.

Table 1. Survey history and schedule 1998-2012

Name and Sensitivity	1998 (Merkel & Associates)	2003	2004-2008	2009-2011	2011-2012
Del Mar manzanita (<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>) FE, CNPS List 1B.1, MHCP.	29 (probably ssp. <i>zacaensis</i>)	<50 located in dense habitat and difficult to count	Likely present	Identity as Del Mar manzanita verified by John Keeley (USGS) ¹ At least 3 individuals, possibly more	Search locality marked on north-facing slope during 2003 McMillan survey
Wart-stem lilac (<i>Ceanothus verrucosus</i>) CNPS List 2.2, MHCP	“in the hundreds”	9		Most locations mapped, for a count of 618 individuals, one habitat assessment carried out late spring 2011	Habitat assessment summer 2012, map northern hillside occurrences
Small-flowered microseris (<i>Microseris douglasi</i> var. <i>platycarpa</i>) CNPS List 4.2	20	not found, probably impacted by development	Not found	Individuals located during late spring 2011	Survey in 2012
Western dichondra (<i>Dichondra occidentalis</i>) CNPS List 4.2	unknown	common	Several populations found	Several found and mapped	Map where located
Palmer’s grapplinghook (<i>Harpagonella palmeri</i>) CNPS List 4.2	???	Approximately 400	Over 100 individuals 2006 Two areas found Censused and mapped 1203 counted, an additional 550 estimated 2008	None	None
Orcutt’s hazardia (<i>Hazardia orcuttii</i>) CT, CNPS list 1B.1 MHCP	none	20 (transplanted from the Manchester HCA)	100 planted in 2004, Approximately 100 censused 2005 106 adults, 3 seedlings 2007 100 adults, 17 seedlings, 1 juvenile 2008	All 104 adults continue to survive with most flowering regularly, and reproduction annually with good recruit survival and juveniles exhibiting vigorous growth	Census & Habitat assessment 2012
Nuttall’s scrub oak (<i>Quercus dumosa</i>) MHCP, CNPS List 1B.1	??? (“lightly scattered”)	common	11 mapped 2008	13 mapped	Map northern hillside occurrences
Cliff spurge (<i>Euphorbia misera</i>) MHCP, CNPS List 2.2	“one thicket”	3	Approximately 16 censused & mapped 2008		Census 2013
California boxthorn (<i>Lycium californicum</i>) CNPS List 4.2			Two stands found & mapped 2008		None

FE= Federally listed endangered; CT= California threatened; MHCP= Multiple Habitat Conservation Program Covered Species; CNPS= California Native Plant Society listing criteria; ???= no initial count made during planning process.

¹ SDNHM is the San Diego Natural History Museum. Vouchers were given to SDNHM in May 2009, and these have not been verified to date. Keeley et al. (2007) published the most recent systematic treatment for *Arctostaphylos glandulosa*, and has verified collections submitted to him as meeting our taxonomic determinations

2. **Habitat Assessments** Habitat assessments for sensitive species known to occur on the HCA will be conducted during this fiscal year (Table 1).

Wart-stem lilac One stand assessment plot was accomplished inside chaparral containing wart-stem lilac during spring 2011. Another location will be determined (likely nearby the southeast corner) and another assessment carried out in 2012. The assessment is performed using the CNPS combined releve' and rapid assessment form. Estimation area is a circle with radius of 15 meters from a GPS'd center pivot marked with rebar and flagging.

Orcutt's hazardia Surveys will continue to include assessments of the transplanted Orcutt's hazardia, and will encompass counts of adult transplants as well as recruitment studies (see below). See CNLM 2011 for more information on counts and pattern for Orcutt's hazardia measures. Point-intercept data for cover by species and for edaphic cover conditions will be measured.

Orcutt's hazardia population studies. Transplanted hazardia will continue to be censused. Seedlings will be counted and a size class category will be applied to each. Size classes are: seedling (no branching), juvenile (branching, no flowering), or adult (flowering). Demography measures may aid in producing a population viability model at some future time. Seed viability studies (Typically a component of population viability matrices) are not currently plausible, due to a limited annual budget.

No other biological monitoring activities are planned for the management year, aside from incidental wildlife mapping while carrying out other tasks.

C. Habitat Maintenance

Our primary management objective this management year, as with last year, is the eradication of Natal grass and Saharan mustard. Yearly control efforts have been ongoing for both species. Several years of aggressive removal of Sahara mustard appear to have virtually eradicated this forb from the HCA, but there may be small infestations inside the northern section where two consecutive years of removal has taken place. Infestations found in any location will be noted and removed as soon as possible. Pampas grass will be found and killed during the late summer months, as they make themselves more apparent by flowering. A few Veldt grass (*Ehrharta calycina*) continue to be found in an area nearby one of the Del Mar manzanita localities, and we will find and destroy these. The priority weeds for removal will remain those mentioned above, as they pose a much more imminent threat to the viability of the HCA than weeds like tree tobacco. Our ultimate goal for all those listed above is eradication.

D. Public Services

Public service activities include the patrolling of the HCA, consulting with neighbors and the Home Owners Association (HOA) about perimeter landscaping and responding to emergencies. However, other opportunities for public service may be forthcoming during the year with local

groups and individuals interested in volunteering labor for HCA projects (as mentioned in the previous section), and class field trips from local schools.

1. **Patrols** Patrols will be performed approximately two to four times per month. Biological surveys, weed removal and other HCA activities tend to reveal emerging issues as effectively as patrol activities. Routine trash removal, fence and sign repair are the main tasks during patrol. Observations of sensitive species and new human impacts will be noted during patrols.
2. **Emergency Response** Staff time has been allocated from the current budget for response to emergencies on the HCA. Such emergencies could include response to wildfires, wildlife problems reported by neighbors and illegal trespass.

Table 2. Sensitive plants present and threats

Name	Threats	Actions Planned
Del Mar manzanita (<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>) FE, CNPS List 1B.1, MHCP.	Natal grass Veldt grass Human disturbance	*Grass control will take place throughout HCA Frequent patrol
Wart-stem lilac (<i>Ceanothus verrucosus</i>) CNPS List 2.2, MHCP	Fire Human disturbance	Frequent patrol
Small-flowered microseris (<i>Microseris douglasii</i> var. <i>platycarpa</i>) CNPS List 4.2	Saharan mustard Human disturbance	All Saharan mustard found will be hand-pulled, Frequent patrol
Western dichondra (<i>Dichondra occidentalis</i>) CNPS List 4.2	Saharan mustard Human disturbance	All Saharan mustard found will be hand-pulled, Frequent patrol
Palmer's grapplinghook (<i>Harpagonella palmeri</i>) CNPS List 4.2	Saharan mustard Human disturbance	All Saharan mustard found will be hand-pulled, Frequent patrol
Orcutt's hazardia (<i>Hazardia orcuttii</i>) CT, CNPS list 1B.1 MHCP	Saharan mustard Other shrubs Human disturbance	Any threats deemed to decrease recruitment will be controlled
Nuttall's scrub oak (<i>Quercus dumosa</i>) MHCP, CNPS List 1B.1	Human disturbance	Frequent patrol
Cliff spurge (<i>Euphorbia misera</i>) MHCP, CNPS List 2.2	Fire Natal grass Veldt grass Human disturbance	Frequent patrol Grass control will take place throughout HCA
California boxthorn (<i>Lycium californicum</i>) CNPS List 4.2	Fire Natal grass Veldt grass Human disturbance	Frequent patrol Grass control will take place throughout HCA

*Grass refers to the two species of South African origin presently on HCA: Natal and Veldt grass

E. Conservation Easement Compliance Monitoring

The HCA Manager will monitor compliance of all areas of the Conservation Easement (CE) to ensure the conservation values are maintained in perpetuity. Center practices for monitoring and reporting on CEs is derived from the CE agreement, CNLM's CE enforcement policy, and Land Trust Alliance standards (through which CNLM is an accredited land trust). A baseline report is prepared on a preserve, or on the portion where the CE exists, and then annual

monitoring (or as often as stipulated in the CE) occurs to document any changes in the baseline condition. This process insures CE's are being managed appropriately, and ensures continuity of process. Compliance visits are to be carried out during the later portion of the management year, and will be appended to each year's annual report.

F. Reporting

Reporting requirements include the management of the HCA's database/GIS system, the photo-documentation stations, and the production of various status reports to the USFWS, CDFG and CNLM administration.

- 1. Database/GIS Management** Data derived from routine patrols and photo-documentation will be entered into and maintained in the HCA's existing database/GIS system. Additional databases will be established for the various biotic monitoring programs including the production of historical and current vegetation maps.
- 2. Reports**
 - a. Year-End/Agency Reports** By the end of November 2012, a year-end report will be prepared by the HCA manager detailing the results of the year's management activities. This report will include recommendations for the continuation of various activities for the following management year and will be submitted to the City of Carlsbad, USFWS and CDFG as required under permit reporting conditions.
 - b. Annual Work Plan** The work plan for the 2012-2013 management year will be formulated by the end of the 2011-2012 management year and will be based upon experiences during previous years' operations. This work plan will be submitted to the City of Carlsbad, USFWS and CDFG.
- 3. Plant Abstract Preparation** The Center is conducting rare plant and animal monitoring and research on our HCA system. Data are being collected and compiled on these plants and animals. The Center has allocated funds to begin preparation of plant abstracts for certain City of Carlsbad's Covered Species (plants). These papers will summarize what is known and not known about each species and will provide recommendations on what research and/or management actions are needed for conservation and perpetual management of each species.

F. Office Maintenance

HCA management will maintain offices in an organized manner to facilitate maximum efficiency. This section of the budget includes funds for general office work, utilities, and telephones, among other items/tasks.

G. Operations

Operations include the training and professional growth of CNLM personnel, and inspection of the HCA by CNLM administration. Funds have been allocated in the current budget for the HCA Managers to attend classes or seminars during the 2011-2012 year. Also included within this category of activity is the conduction of employee reviews.

III. Workloads and Budgets

A. Supervision and Staffing

The San Diego Regional Preserve Manager will be supervised by CNLM's Director of Science, Dr. Deborah Rogers. Tasks and priorities will be coordinated by the Regional Preserve Manager and approved by Dr Rogers. The Regional Preserve Manager, Markus Spiegelberg will supervise the HCA Managers, Patrick McConnell and Jessica Vinje. Additionally, Dr. Rogers will assist with document review and scientific research conducted on CNLM preserves.

B. Budgeting

A total budget of \$ 13,128 has been allocated for this management year and is included here as Appendix 2. Every effort will be made by the Center to allocate time and expenses according to this estimated budget.

IV. References

CNLM. 2011. Kelly Ranch Habitat Conservation Area Annual Report. December, 2011.

CNLM. 2008. Habitat Management Plan for the Kelly Ranch Habitat Conservation Area. April, 2008.

Keeley, J. E., M. C. Vasey, and V. T. Parker. 2007. Subspecific variation in the widespread burl-forming *Arctostaphylos glandulosa*. Madrono. 54(1) 42-62.

APPENDICES

Appendix 1. Task Schedule

Task	October- December 2011	January-March 2012	April to June 2012	July to September 2012
Nonnative Plant Removal	X	X	X	X
Sensitive Plant Surveys		X	X	X
Habitat Assessments		X	X	
Orcut's Hazardia Population Studies				X
GIS/Database	X		X	
Patrolling	X	X	X	X
Reports				X

Appendix 2. HCA Location Maps

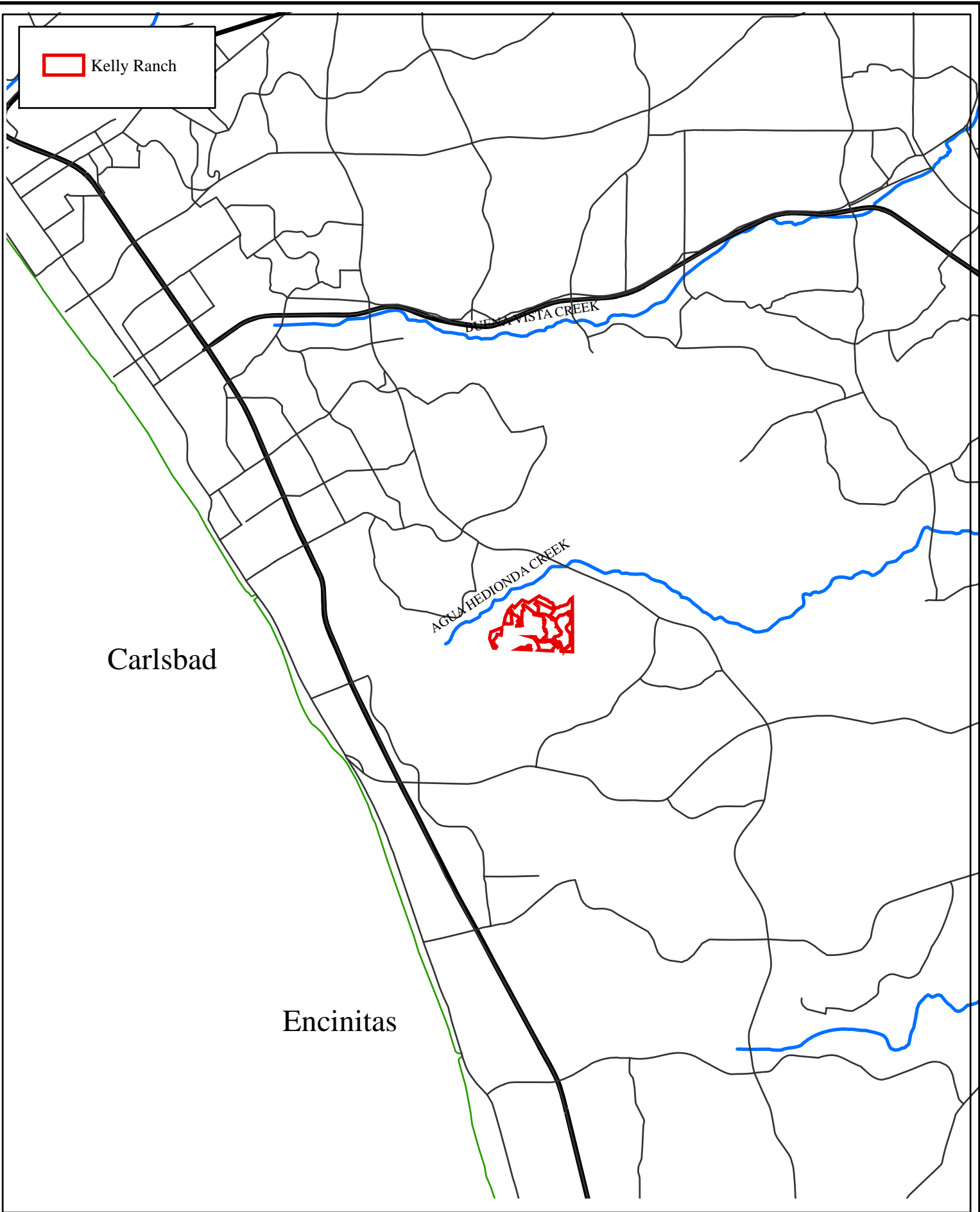


Figure 1
Preserve Vicinity
Kelly Ranch Habitat Conservation Area - Carlsbad, CA





Figure 2
Preserve Location
Kelly Ranch Habitat Conservation Area - Carlsbad, CA

